

DNA Controls	Sequence
Q38 2:2 Sequencing Control	CTCACCCACAACCACAAACAATTAAATACGATTAAATAATATT AATATATTATCGATTAATAATAATTAAATTAAATTATTTGATGTGA TGGTGGTATGG
Q38 1:2 Sequencing Control	CTCACCCACAACCACAAACAATAATAAGATTAAATAATATT AATATATTATCGATTAATTATTATTAAATTAAATTATTTGATGTGA TGGTGGTATGG
Q38 2:1 Sequencing Control	CTCACCCACAACCACAAACAATAATAACTATTAAATAATATT AATATATTATCGATTAATATTATTAAATTAAATTATTTGATGTGA TGGTGGTATGG
Q68 3:3 Sequencing Control	TCACCATCTACCATCCAACCATTAAATACGATTAAATAACATT AATATATTATCGATTAATAAGAATTAAATTAAATTATTTGATGTGA TGGTGGTATGG
Q78 6:6 Sequencing Control	ATCCACATCATTACCCATCCATTAAATACGATTAACGAACATTAA ATACGTTATCGATTAATAAGACGTAATTAAATTATTTGATGTGAT GGGTGGTATGG
Q36 6:3 Sequencing Control	CTCACCCACAACCACAAACAATTAAATACGATTAACATTAA AATACATTATCGATTAATAAGACTTAATTAAATTATTTGGTTGGAT GGTAGATGGTGA
Q37 12:12 Sequencing Control	CTCACCCACAACCACAAACAATTGACGTACCGCGTAACGAACATT AATACGTTATCGATCAAGCAAGACGTACTTCGTAGTGGATGGGT AATGATGTGGAT
Digestion Control Sequence	CTCACCCACAACCACAAACAATTAAATACGATTAAATAATATT AATATATTATCGATTAATAATAATTAAATTAAATTATTTGATGTGA TGGTGGTATGG

Primers	Sequence (5=5-methylcytosine)
Q3 Primer	CT5AC5CACAA5CACAA5CA
Q6 Primer	TCA5CAT5TACCATC5AAC
Q7 Primer	ATC5ACAT5ATTA5CCATCC
Q8 Primer	CCATA5CAC5CATCA5ATCA
Digestion Control Forward Primer (DFP1)	5T5A5CCA5AAC5A5AAA5A
Digestion Control Reverse Primer (DRP1)	CCATACCAACCATCACATCA
Digestion Control Post-Bisulfite Forward Primer (DFP2)	CTCACTTACAATCACAAACA

**Sequences of control DNA oligonucleotides.** Sequences of sequencing and digestion control DNAs are given without modifications. 5mC modifications are incorporated with primers containing 5mC and 5hmC modifications with 5hmCTP during PCR. Sequences of primers are given to shown position of 5mC in primer regions of control DNAs. All other Cs and Gs in the sequencing/digestion controls are 5hmC. For sequencing controls, the number of the DNA relates to the two primers used in the PCR, e.g. primers Q3 and Q8 are used to synthesize Q38 2:2 sequencing control. The digestion control has its own primer pairs, and a different primer for post-bisulfite treatment, when the C's have converted to uracil.